

exsertum Small; but that species, which abounds on some of the salt marshes of Nova Scotia and New Brunswick, is a tall erect plant with brown many-nerved ochreae, and with the narrower shorter sepals alternately long and short, the outer or longer ones comparatively firm and green.

GRAY HERBARIUM.

NOTES ON THE FLORA OF THE PENOBSCOT BAY REGION, MAINE.

ALBERT F. HILL.

THE following plants collected for the most part during the summer of 1913 at various places about Penobscot Bay seem worthy of note chiefly as regards their distribution. Extensions of ranges are based on the distribution of the plants as shown by the material in the Gray Herbarium and the herbarium of the New England Botanical Club.

JUNIPERUS HORIZONTALIS Moench. Additional stations to those cited for this region by Norton in *RHODORA* for August, 1913, are Isle au Haut and Swans Island where the plant is very common, forming large colonies on exposed granite sea cliffs.

PINUS RIGIDA Mill. The common Pitch Pine of southern New England occurs at almost its northern limit in this region. In addition to several stations on Mount Desert it is common on the sterile slopes of Mt. Champlain at Isle au Haut and at several localities on the mainland at Brooklin.

AGROSTIS ALBA L., var. *ARISTATA* Gray. This rather uncommon variety was collected on the shady bank of a stream at Brooklin. Only four other Maine stations are represented in the above herbaria.

AMMOPHILA ARENARIA (L.) Link. Owing to the rocky nature of the coast and the consequent scarcity of sand dunes this plant, so common to the south and in the Maritime Provinces, has hitherto been unreported from the region east of Knox County in Maine. Only one small station was found on the southern side of Swans Island.

ELYMUS VIRGINICUS L., var. *HIRSUTIGLUMIS* (Scribn.) Hitchc.

Two collections made in Brooklin are the first reported for the state. However, part of the material in the Mount Desert Herbarium passing as the typical form is in reality this variety.

AGROPYRON REPENS (L.) Beauv., var. *PILOSUM* Scribn. This plant reported occasionally from various localities in the state seems to be rather common in this region. Collections were made at Swans Island, Isle au Haut and Deer Isle, all on sea beaches.

SCIRPUS CYPERINUS (L.) Kunth. This sedge is known from Penobscot County southward and southwestward with isolated stations at Mount Desert and Isle au Haut.

SCIRPUS PEDICELLATUS Fernald. As represented in the above herbaria this plant has an interesting distribution. It is common across the northern part of the state and on the coast as far east as Kennebec County. It reappears again around Penobscot Bay. Miss Furbish found it at Swans Island and two collections were made this year at Isle au Haut.

CAREX CANESCENS L. While common inland in Maine, this plant is much more restricted on the coast than the varieties. It has been collected only at Cutler, Brooklin and Swans Island.

CAREX STELLULATA Good., var. *ANGUSTATA* Carey. Until now the only recorded coastal station for this common inland plant has been Mount Desert. To this may be added a station at Flyes Point, Brooklin.

CAREX SALINA Wahlenb., var. *KATTEGATENSIS* (Fries) Almq. A fifth Maine station at Brooklin can now be added to those at Lubec, West Pembroke, Waldoboro and Chebeague Island.

JUNCUS GREENEI Oakes & Tuckerm. With the exception of a few Mount Desert stations, Brooklin is the eastern limit of this rush.

BETULA LUTEA Michx. f. In his article on "Woody Plants of Brooklin, Maine" in *RHODORA* for September, 1910, A. H. Graves does not include the yellow birch in the list. There are several stations in Brooklin and the tree is also common on the islands.

QUERCUS RUBRA L., var. *AMBIGUA* (Michx. f.) Fernald. The only fruiting Red Oak seen at Brooklin was this variety and it is quite likely that the other trees, all of which were close at hand, will prove to be the same.

ARENARIA PEPLOIDES L., var. *ROBUSTA* Fernald. Norton, in his article above referred to, states that this plant is strictly local and cites a few stations on the outer islands. The plant is quite frequent

at Brooklin, occurring where there is the least semblance of a sandy beach. There are also several plants of the same variety on Swans Island.

RANUNCULUS LAXICAULIS (T. & G.) Darby. This was collected in a muddy pond hole at South Deer Isle, its easternmost station. Norton reports the plant from apparently the same locality.

CAMELINA SATIVA (L.) Crantz. This plant occurs sparingly as a weed in the northern section of Maine, but has not been reported on the coast east of York. It was fairly abundant in a potato field at Brooklin.

ERYSIMUM CHEIRANTHOIDES L. This has a similar range in the state. It was found in profusion on a sandy barrier beach at Flyes Island, Brooklin. The only other coastal station in the two herbaria is Cumberland.

SISYMBRIUM OFFICINALE (L.) Scop. The second Maine station for this plant is a sandy beach at Swans Island Head. Previously it had been known only from Brownville.

CRATAEGUS JONESAE Sarg. This thorn, described from Mount Desert and very common on the western shore of Penobscot Bay, is equally common at Brooklin and on the islands. It has been also recorded from Washington County.

LATHYRUS PALUSTRIS L., var. *PILOSUS* (Cham.) Ledeb. The distribution of this plant as shown in the two herbaria is interesting. It occurs from Eastport along the coast to Mount Desert but is unrepresented from the area between there and the coast of Massachusetts. It is very abundant in the Penobscot Bay region, both on the mainland and the islands.

RUBUS PUBESCENS Raf., var. *PILOSIFOLIUS* A. F. Hill. The pubescent variety of the dwarf raspberry was first collected at Brooklin.

EMPETRUM NIGRUM L. This is reported as 'local' by Norton and 'rare' by Graves, but it is very common on headlands and exposed granite rocks, more so on the outer islands than on the mainland.

COREMA CONRADII Torr. This is extremely common on rock outcrops at Swans Island and at Brooklin, where it is found, not in a bog in the Central Tract as Graves states, but on rocks at the edge of the bog. It has been previously reported from Isle au Haut.

ILEX VERTICILLATA (L.) Gray, var. *PADIFOLIA* (Willd.) T. & G. This was found very frequently at Brooklin and on the islands, though there had been no specimens from the state in the herbaria before.

Examination of the Mount Desert material shows much of it to be this variety.

DECODON VERTICILLATUS (L.) Ell., var. *LAEVIGATUS* T. & G. The stations for this variety at Isle au Haut and Deer Isle are northeastward extensions from Kennebec County.

EPILOBIUM ADENOCAULON Haussk., var. *PERPLEXANS* Trel. A collection at Hat Island near Swans Island is the first made in the state.

CORNUS CANADENSIS L., var. *INTERMEDIA* Farr. A bunchberry collected in dry soil on the sterile slopes of Mount Champlain on Isle au Haut proves to be this variety, which has been known in the East only from Labrador and western Newfoundland.

VACCINIUM ATROCOCCUM (Gray) Heller. This has hitherto been known from Orono and from Knox County southwestward. It is very abundant in a sphagnum bog at Brooklin and in several swamps on Deer Isle.

MERTENSIA MARITIMA (L.) S. F. Gray. Swans Island and Isle au Haut may be added to the list of stations for this plant in Norton's list. It is interesting to note that in this region at least, the plant occurs only on the outer islands on the more exposed headlands or beaches.

ACHILLEA LANULOSA Nutt. The Swans Island material is the first collection of this plant made in Maine.

YALE UNIVERSITY.

A NORTHERN VARIETY OF *ASTER LINARIIFOLIUS*.

M. L. FERNALD.

THE handsome rigid-leaved *Aster linariifolius* is found somewhat generally on arid or sterile, gravelly or sandy soils throughout the eastern United States, extending northward in the northeast to Lake Champlain, Vermont, Grafton County, New Hampshire and southern Somerset and Penobscot Counties in Maine; i. e. in New England its northern limit is at about latitude 45°, its eastern limit at the Penobscot Valley. North and east of this limit *Aster linariifolius* is extremely rare and much of the evidence of its occurrence is open to serious doubt, although it is listed in Macoun's *Catalogue* from three regions: "Newfoundland. (*Cormack*.) Nepisiquit River, N. B. Rather